

Patent Application
Docket No. 34645-00502USPT
Ericsson No. P13296-US2

REMARKS

This Amendment is submitted in reply to the Office Action dated September 8, 2004. Applicants respectfully request reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

Upon entry of the foregoing Amendment, Claims 17-26 are pending in the application. Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding objections and rejections.

Summary of the Examiner's Rejections

FIGURE 8 was objected to for failing to comply with 37 CFR 1.84(p)(5) because the reference character "80D" was not mentioned in the description.

Claims 1-3, 5-11 and 13-16 were rejected under 35 U.S.C. 102(e) as being anticipated by Hamiti (US 6,751,209).

Claims 4 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hamiti (US 6,751,209) in view of Applicant Admitted Prior Art (AAPA).

Summary of Amendment

Applicants have canceled without prejudice Claims 1-16 and added Claims 17-26 to more particularly define the present invention.

Remarks regarding objected Drawing

FIGURE 8 was objected to for failing to comply with 37 CFR 1.84(p)(5) because the reference character "80D" was not mentioned in the description. Applicants have amended the specification to include the reference character "80D". No new matter was added to the specification. Accordingly, Applicants respectfully requests removal of the objection to the drawings.

Remarks regarding § 102(e) and 103(a) rejections

Applicants respectfully submit that new independent Claims 17, 22 and 25 are patentable over Hamiti and/or AAPA. The claimed invention as recited in amended independent Claim 17 (for example) follows:

1. A method for sending an Internet Protocol (IP)-based data packet across a radio link, said method comprising the steps of:
compressing a packet header in the IP-based data packet, where said compressed packet header contains information related to changed values within an IP Identification header field, a Real-Time-Transport Protocol (RTP) sequence number field and a RTP time stamp field when compared to values in a packet header associated with a previous IP-based data packet;

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compressing said compressed packet header again such that said further compressed packet header does not contain any information at all related to the IP identification header field, the RTP sequence number field and the RTP time stamp field; and
transmitting said IP-based data packet that has said further compressed packet header across the radio link (emphasis on distinguishing limitations).

New independent Claims 22 and 25 contain the same or similar distinguishing limitations which are recited in new independent Claim 17.

The teachings of Hamiti and/or AAPA differ significantly from the present invention as recited in the new independent Claim 17. First, the new independent Claim 17 recites a limitation where an IP-based data packet, which is transmitted across a radio link, has a compressed packet header that does not contain any information at all related to an IP identification header field, a RTP sequence number field and a RTP time stamp field. Hamiti does not teach where an IP-based data packet, which is transmitted across a radio link, has a packet header that does not contain any information at all related to an IP identification header field, a RTP sequence number field and a RTP time stamp field. Instead Hamiti teaches where these header fields are compressed into abbreviated fields which still has information related to the fields before being transmitted over the radio link. This is described in detail in the following highlighted text—col. 6, line 43 through col.15 and col. 10 lines 45-60—taken from Hamiti:

The changing fields to be transmitted in this embodiment are field 316 indicating the RTP sequence number, field 317 indicating the RTP timestamp and field 335 indicating the IP identification. Appreciating the fact that the increments in these fields generally remain constant throughout the session, a prior art delta-coding (with reference to a previously transmitted packet) scheme could be suggested. Anyhow, to avoid the problems presented earlier, an independent identification is provided for each network layer packet subject to the compression (col. 6, lines 43-52)*.

In the first embodiment, header fields are compressed into abbreviated fields and transmitted over the link. The length of an abbreviated field is chosen to provide transmission of information that facilitates a correct identification of the packet during a compression sequence, an interval that is generally shorter than the session. Short-term identification, provided by the abbreviated fields, combined to a longer-term context maintained in the decompressor provides a consistent identification of packets throughout the data transfer session, and thus enables unambiguous mapping of compressed header fields to full header fields throughout a whole data transfer session (col. 6, lines 53-64).

As an example of such an arrangement, a case of an abbreviated time-stamp is presented. FIG. 5 represents a format for a compressed header used in this embodiment. Field 51 indicates the type T of the compressed packet. If T=0, the last octet 56 is not included and the last six bits 53 of the first octet are set to zero, used for some other purpose, e.g. for CRC check, or used for an abbreviated time-stamp. If T=1 the compressed header shall include the length octet and the bits 53 and the last octet 56 are used to indicate the length of the RTP payload. This length information is needed with bit streams where the packet length may vary, e.g. video bit-streams. Field 52 indicates the marker bit of the RTP header as explained earlier. The abbreviated time-stamp in this embodiment is a 16-bit field that indicates the 16 least significant bits of the

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RTP time-stamp. The context data comprises the 16 most significant bits of the RTP time-stamp and will be maintained at least in the decompressor end of the link (col. 6, line 65-col. 7, line14).

When a packet is received from the speech codec to be transmitted to the SGSN (step 9), it is checked (step 93) whether there is any change in the no-change fields of the header to be compressed and the fields in the state of compression. If no changes are detected the header is compressed as described earlier (step 94) and the compressed packet is sent to the decompressor (step 95). Anyhow, when changes are detected, a new SDCP functionality will extract from the new header only the changed no-change fields (step 96), update them to the stored state of compression (step 97), transmit said values to the SGSN (step 98) and update the values to the state of compression stored in the SGSN as well (step 98). Transmission of such information can be done using acknowledged mode or strong error protection (col 10, lines 45-60).

In fact, what Hamiti describes in the aforementioned text appears to be related to the first compression step recited in the new independent Claim 1. However, Hamiti does not teach the second compression step and the transmission step recited in the new independent Claim 17. AAPA does not cure these defects. Accordingly, Applicants respectfully submit that the aforementioned substantial difference between Hamiti and/or AAPA and the new independent Claims 17, 22 and 25 and their associated dependent Claims are indicative of the patentability of the present invention.

Conclusion

From the foregoing, Applicants respectfully submit that all of the stated grounds of objections and rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicants respectfully request reconsideration of all outstanding objections and rejections of pending Claims 17-26.

It is believed that \$ 372.00 is required for this paper because of the addition of new Claims 17-26. The Commissioner is authorized to charge this fee and any other fees which may be required for this paper to Deposit Account No. 50-1379.

Respectfully submitted,



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